

US DEPARTMENT OF AGRICULTURE
FOREST SERVICE



**Northeastern Area
State & Private Forestry
DIVISION OF FOREST PEST CONTROL**

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**Aerial Survey of Forest Tent Caterpillar
Defoliation in Minnesota**

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INTRODUCTION

An aerial survey of northern Minnesota in cooperation with the Minnesota Department of Agriculture was made July 9, 1969, to determine the area affected and degrees of defoliation by the Forest Tent Caterpillar (Malacosoma disstria Hbn.).

METHODS

A Cessna 182 was used for the survey. Flight lines were flown in an east-west direction, 1000 feet above the ground at 3 mile intervals in heavily defoliated areas and 6-12 miles in all others. The aerial observers, two from the State and one from the U. S. Forest Service, used 1/2" to the mile county maps. Two classes of defoliation were recorded by sketch mapping.

Light to moderate - 30-60% defoliation
Heavy - 61%+ defoliation

RESULTS

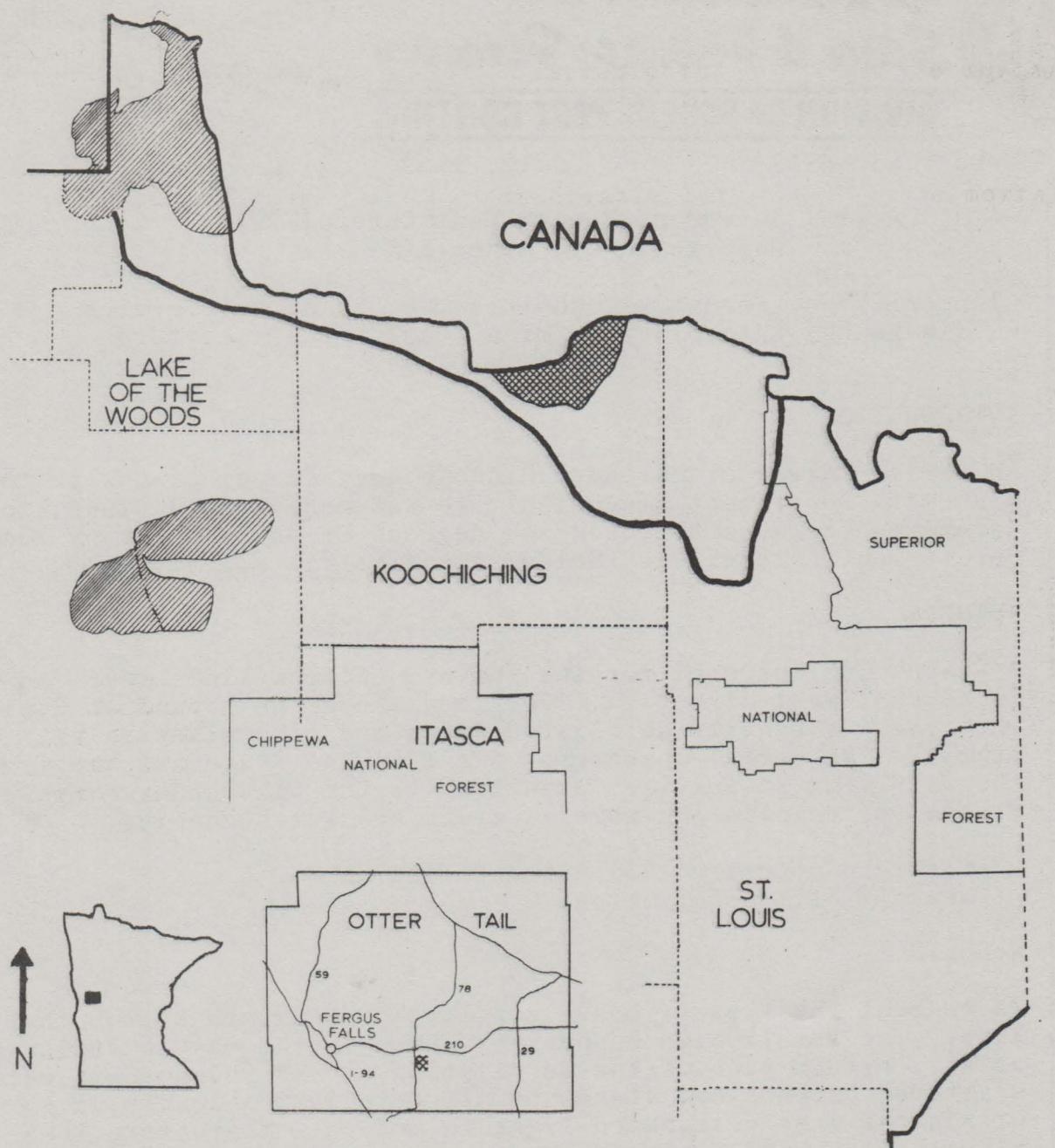
In general the area of heavy defoliation has shrunk from that in 1968. The defoliation boundaries shown on the map include gross areas. Within each of the defoliation levels shown there were scattered patches and stands of all defoliation levels, i.e. within the area designated light to moderate there were individual trees and scattered groups (too small to map) that were heavily defoliated or not defoliated.

An isolated 200 acres in Otter Tail County, primarily basswood, was heavily defoliated. This area (see map) is on the S.W. corner of Clitherall Lake and is approximately 200 miles from the current outbreak.



To date there has been no observable top kill or tree mortality though the general area has been defoliated since 1964.

Preliminary indications show that parasitism may be as high as 68%.



FOREST TENT CATERPILLAR DEFOLIATION- 1969

— BOUNDARY OF DEFOLIATION

□ LIGHT TO MODERATE
▨ HEAVY